

The invention relates to semiconductor material production methods and can be used in semiconductor technology. The method for producing ZnO:Ga:Cl ceramic targets at low temperatures consists in sintering ZnO and Ga₂O₃ powders in a closed volume at a temperature of 900...1150°C. Sintering is carried out by chemical transport reactions, using HCl as a transport agent, with an initial pressure of 0.101...0.608 MPa, at the same time Ga₂O₃ powders are additionally used with a concentration of 1...5 mol% and a granule size of no more than 300 μm to produce ZnO:Ga:Cl ceramic targets, Cl impurities having a concentration of $1 \cdot 10^{18} \dots 5 \cdot 10^{19} \text{ cm}^{-3}$.

The method for producing ZnO:Ga:Cl thin layers at low temperatures consists in vacuumization of magnetron chamber to a pressure of $133.32 \div 666.61 \cdot 10^{-5} \text{ Pa}$, Ar gas injection with a pressure of $0.00013 \div 0.0013 \text{ MPa}$, magnetron sputtering at a deposition temperature of 80...300°C of ZnO:Ga:Cl ceramic targets produced by the method described above.

Claims: 2

Fig.: 5